



Linux

CPT-201

<http://cpt201.hubner.org/>

Tests

- Week 6 - Oct 03 - Test 1 - GNU/Linux, Licensing, RedHat, CentOS, Canonical, Ubuntu, Linus Torvaldes, Richard Stallman, Mark Shuttleworth
- Week 9 - Oct 29 - Test 2 - Linux Commandline
- Week 12 - Nov 14 - Test 3 - System Admin
- Week 15/16 - Dec 5/12 - Final

Test Grades

34 Questions

Added 4 points to everybody's test
(equivalent of 4 correct questions)

C = Questions Correct

T = Total Questions

$$(C+4) / T = \text{Grade}$$

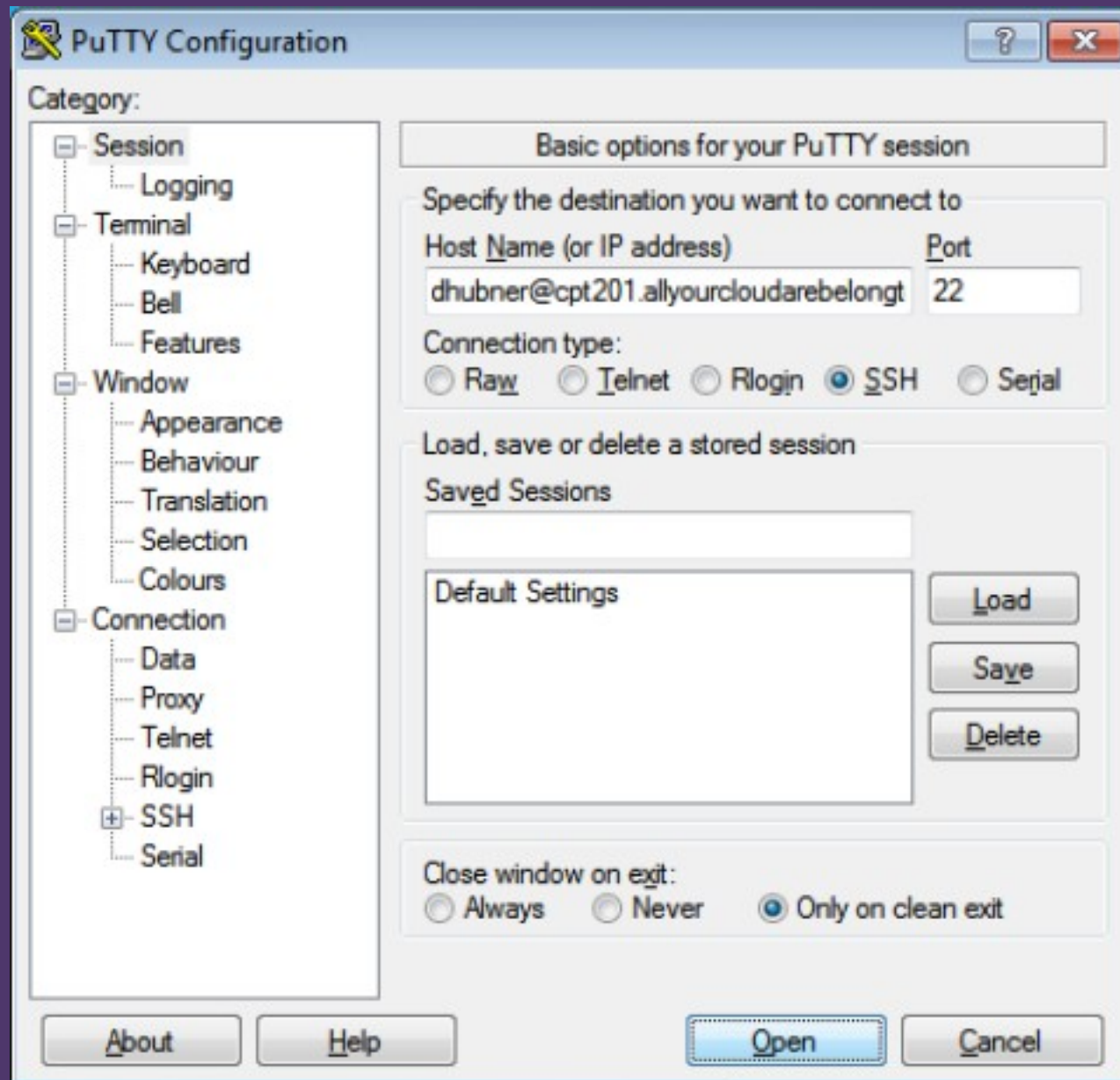
• SSH = Secure SHell

```
ec2-user@cpt201:~  
ec2-user@cpt201:~ 74x24  
(15:24:35) [devon@t510-dhubner:~] ssh ec2-user@cpt201.allyourcloudarebelongtous.com  
Last login: Wed Oct 24 19:23:58 2012 from me-gw.desknetinc.com  
  
  _|  _|  _|  _|  
  _|  (  _|  _|  _|  Amazon Linux AMI  
  _|  \  _|  _|  _|  
  
https://aws.amazon.com/amazon-linux-ami/2012.03-release-notes/  
There are 19 security update(s) out of 126 total update(s) available  
Run "sudo yum update" to apply all updates.  
Amazon Linux version 2012.09 is available.  
  
  Bash Cheatsheet  
  _____  
  | nano    : Edit a Text File      | ls      : List Directory      |  
  | cd      : Change Directory      | pwd     : Print Working Directory |  
  | mkdir   : Make Directory        | rmdir   : Remove Directory     |  
  | less    : View a File           | cat     : Dump a File         |  
  | man     : Display Man Page      | grep    : Search a File       |  
  | head    : Display top of file   | tail    : Display bottom of file |  
  | exit    : Logoff                |  
  |_____|  
  
(19:24:43) [ec2-user@cpt201.crabdance.com:~] █
```

• ssh username@hostname

```
ec2-user@cpt201:~  
ec2-user@cpt201:~ 74x24  
(15:24:35) [devon@t510-dhubner:~] ssh ec2-user@cpt201.allyourcloudarebelongtous.com  
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  |_____|  
  
(19:24:43) [ec2-user@cpt201.crabdance.com:~] █
```

PuTTY = SSH Client on Windows



Getting Around the CMCC Firewall

- SSH Runs on Port 22
- CMCC Blocks Out-Bound Port 22
- You can run an SSH server on a different port
- SSH using port 80

```
ssh -p 80 username@hostname
```

SSH to our CPT201 server

- Port: 80
- Hostname: cpt201.allyourcloudarebelongtous.com
- Username: <First-Initial-Firstname><Lastname>
- Password: !cpt201!

```
ssh -p 80
```

```
dhubner@cpt201.allyourcloudarebelongtous.com
```


You can logon without SSH keys

- Better to use SSH keys than passwords
- SSH keys are two parts: Public and Private.
- **Public Key: give to friends**
- **Private Key: keep under your pillow**
- All stored in ~/.ssh
- **Public: id_rsa.pub**
- **Private: id_rsa**

Generate an SSH Key

ssh-keygen

-t rsa

-b 4096

-C "Devon Hubner"

-P "iLikeToMoveItMoveIt"

Copy Your SSH id to the server

```
scp -P 80
```

```
~/.ssh/id_rsa.pub
```

```
username@cpt201.allyourcl  
oudarebelongtous.com:.
```

Add to the authorized_keys file

```
mkdir .ssh
```

```
cd .ssh
```

```
cat id_rsa.pub >  
authorized_keys
```

```
chmod 0600 authorized_keys
```

Permissions

- u = User
- g = Group
- o = Other (world)

Permission Bits

- **r** = **R**ead
- **w** = Write
- **x** = e**X**ecutable

Examine the permissions on a file

```
touch myfile.txt
```

```
ls -al myfile.txt
```

User - Group - Other

-rw-rw-r-- 1 devon devon 0 Oct 24 18:50 myfile

chmod u=rw myfile.txt

chmod g=rw myfile.txt

chmod o=rw myfile.txt

User - Group - Other

chmod u+x myfile.txt

chmod g=rx myfile.txt

chmod o-rwx myfile.txt

-**rw****xr**-**x**--- 1 devon devon 0 Oct 24 18:50 myfile

User - Group - Other

- Set the User bits to be read, write, and execute
- Set the group bits to nothing
- Set the other bits to nothing

User - Group - Other

- Set the User bits to be read, write, and execute
 - Set the group bits to nothing
 - Set the other bits to nothing
-

```
chmod u=rwx myfile.txt
```

```
chmod g=rwx myfile.txt
```

```
chmod o=rwx myfile.txt
```

Homework

- http://cpt201.hubner.org/wiki/CPT-201_Fall_2012_Homework#Class_7_-_2012.10.10
- Please answer **all** the questions.
- Answers are due by the start of **class 9** on **October 24th**.
- You can try out these commands at home using a **LiveCD** like the **System Rescue CD**. You may also burn one of the other LiveCD's available, like **Tails**.